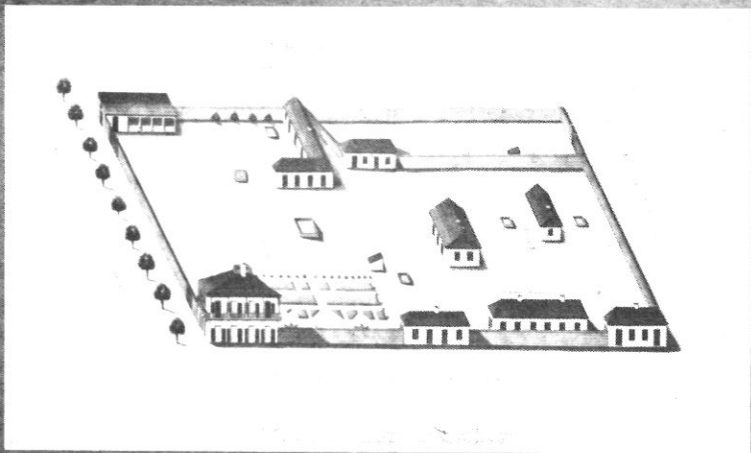


# U.S. Navy Medicine

December 1976



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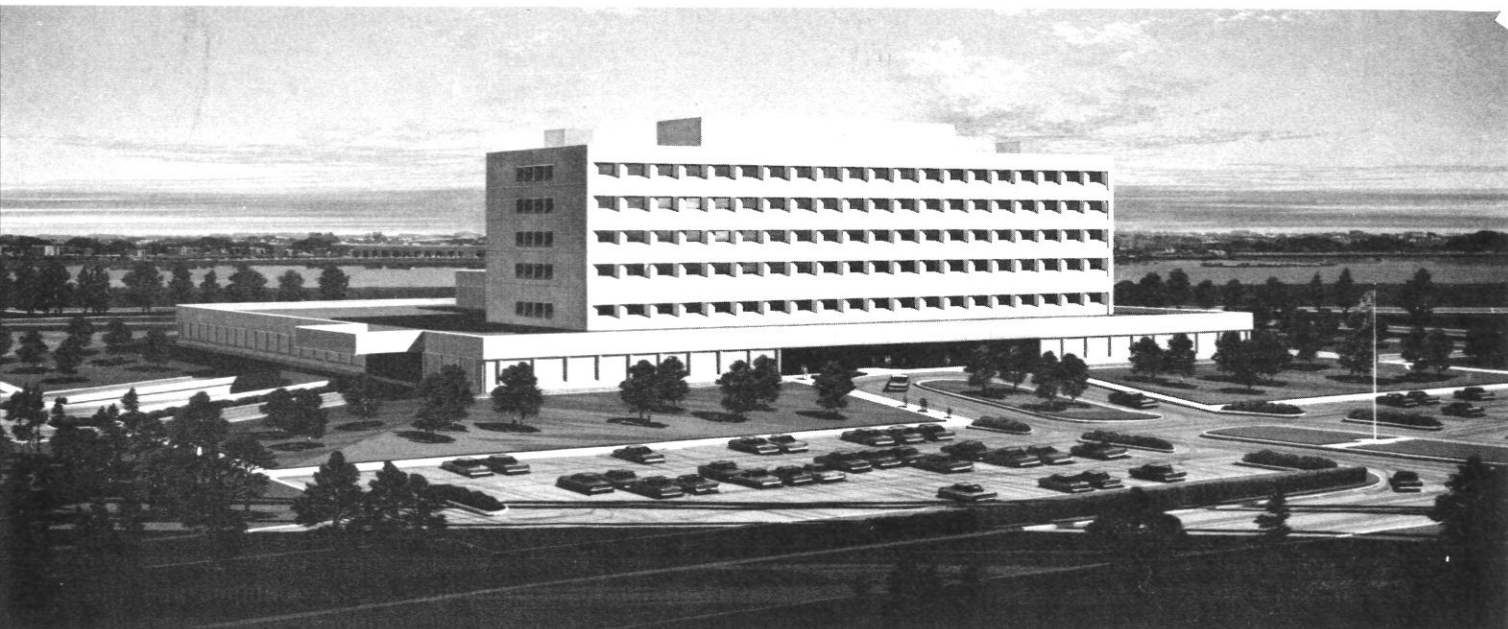
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# U.S. NAVY MEDICINE

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**COVER:** A riverboat passes by the Navy's newest medical center: Naval Regional Medical Center New Orleans, dedicated 7 December 1976. The inset shows the group of buildings Dr. Lewis Heermann used as the first naval hospital in New Orleans in the early 1800's (from *Annals of Medical History*, Vol. V, No. 2, 1923).



## Department Rounds

F. Edward Hébert Naval Hospital

### NRMC "Jazz City"

Outside, there's a lucky silver dollar under the flagpole. Inside, six floors and 213,000 square feet are as chock-full of shiny new things as any Christmas stocking.

It's Naval Regional Medical Center, New Orleans, dedicated this month and scheduled to receive its first patients in January.

Located on the banks of the Mississippi River, across from the world famous New Orleans French Quarter, the new medical center includes the only Navy hospital to be named in honor of an individual: the F. Edward Hébert Naval Hospital. Mr. Hébert, who is retiring from the House of Representatives after 36 consecutive years of service, has been a strong supporter of military medicine while on the House Armed Services Committee.

Besides the 250-bed hospital, the medical center also encompasses branch clinics at Belle Chasse Naval Air Station and Naval Support Activity, New Orleans, and an industrial health clinic in the F. Edward Hébert Defense Complex.



NRMC New Orleans will provide health services to the area's more than 25,000 active-duty and retired military personnel and their dependents. Designed by Curtis and Davis Architects and Planners, and constructed by Frank Briscoe Co., Inc., of East Orange, New Jersey, at a cost of \$17,253,400, the facility features exterior walls of precast architectural concrete, and interior finishes of vinyl, ceramic and quarry tile; carpet; and epoxy resin terrazzo flooring.

Medical and dental outpatient clinics and major diagnostic units are housed on the first floor, along with emergency facilities, dietary services, and areas for storage and staff support. The second floor holds a 20,000-square-foot adminis-



**CAPT Gregg** talks to his staff (top), plants lucky silver dollar under hospital flagpole.



trative area and a surgical wing with four operating rooms, a recovery room, central sterile supply room, and a ten-bed surgical intensive care unit.

On the top four floors there are specialty nursing units which include:

- an obstetrical suite and nursing unit, comprising two delivery

rooms, 16 obstetrical beds, a nursery with 14 bassinets, and a neonatal intensive care unit.

- a 21-bed pediatric unit.
- a 15-bed medical and coronary intensive care unit.
- a 13-bed neuropsychiatric-convalescent nursing unit.

Rooms are designed for one, two or four patients.

**Patient support.** The newest patient-oriented support systems have been incorporated throughout the hospital. A nurses' call system provides two-way communication between patient areas and nursing stations, allowing the nursing staff to monitor patients from a central location. A medical utility system provides laboratories, operating

## Out of the Past

Naval Regional Medical Center, New Orleans is at least the fourth, and probably the fifth naval hospital established in that city. The early facilities bore scant resemblance to today's elaborate medical center. Although the Act of Congress passed on 26 February 1811 authorized the establishment of naval hospitals, 10 years passed before organized efforts were made to secure funds for land, buildings, and equipment. Until then, industrious Navy surgeons established small hospitals at various navy yards and stations using whatever means they had at hand.

One such concerned surgeon was Lewis Heermann, born and educated in Germany, who had gained considerable fame for his service in the war with Tripoli. In 1810, Dr. Heermann wrote the Secretary of the Navy asking permission to establish a hospital in New Orleans—a city of about 15,000 inhabitants. As the port of entry to the Mississippi River, New Orleans was gaining importance as a shipping point for the Louisiana Territory, purchased seven years earlier.

In New Orleans, Dr. Heermann was the senior medical officer of the federal government. He established a residence, and soon after purchased a property facing the levee (then called the Promenade Publique) between the Rue de la Paix and the Rue de Caza-Calvo. This property he fitted up for use as a hospital and rented to the government for \$140 a month. The sick of the Navy, who had been treated in



Dr. Lewis Heermann, USN

dilapidated quarters in the Faubourg de la Course, were moved to Dr. Heermann's property, which came to be known as United States Naval Hospital, New Orleans.

In his later years Dr. Heermann was too ill to practice medicine; his hospital, whose proper functioning depended entirely upon his own professional ability, apparently was closed as his health declined.

According to information filed at the Bureau of Medicine and Sur-

gery, there probably was another hospital established in New Orleans during the Civil War. A Surgeon Foltz, who was with Admiral Farragut during the capture of New Orleans, established a hospital at Pilot Town, some 50 miles south of New Orleans, prior to the attack. The location proved unsuitable and after only a few months the hospital was disestablished. But Farragut's force remained in New Orleans for a considerable time after the city was captured, and it is reasonable to assume that hospital facilities were provided to the fleet during that time.

There are a few photographs and sketchy reports at BUMED of a naval hospital existing in New Orleans in 1918. Another naval hospital was commissioned there on 1 June 1943, with the mission of providing medical care for naval facilities in the southern Mississippi River area. This 400-bed hospital expanded during World War II until on VJ Day in 1945 the patient census was 1,212. The hospital was deactivated in 1946.

Naval Hospital New Orleans, around 1918





rooms, and patient areas with any required combination of oxygen, natural gas, compressed air, nitrogen, or nitrous oxide. A vertical trash and linen removal system, and a central housekeeping vacuum system help keep critical care areas of the hospital clean. And a module transport system moves materials between the second floor central sterile supply area and nursing units on the upper floors.

To simplify the job of dictating and transcribing narrative summaries and operative reports for health records, a central dictation and transcription system has been installed.

Patients at NRMC New Orleans are sure to be among the best protected and entertained. From a communications center, open 24 hours a day, a closed circuit security television system monitors selected areas inside and outside the hospital. A fire alarm monitoring system, an alarm system that sounds when the door to a critical area is opened, and central monitoring of the hospital's heating, cooling, refrigeration, medical gas, and electrical systems provide more security.

A multichannel patient entertainment system, controlled in the communications center, brings radio programs, closed circuit or commercial television programs, music from phonograph records or tapes, and religious services to each patient's bedside. One color television set is provided every two patients.

A music and paging system brings background music to all public areas of the hospital, and an external UHF radio system allows communication with key members, or with security personnel and civil defense officials.

As commanding officer of the naval medical facility in New Orleans, CAPT Paul C. Gregg (MC) steps into a job once held by Dr. Lewis Heermann, one of the most notable physicians in Navy history (see box). CAPT Gregg and his staff—ready for business in Jazz City—will give the Medical Department plenty to toot its horn about.



USUHS charter class at welcoming ceremonies

USUHS

## The Charter Class Signs On

Nine naval officers are in the 32-member charter class admitted in October to the School of Medicine, Uniformed Services University of the Health Sciences.

The students completed a five-week medical orientation, including a tour of selected Navy, Army and Air Force medical facilities in Virginia and Texas, before settling down to classwork on 12 November. Classes are being held in temporary facilities at the Armed Forces Institute of Pathology, Washington, D.C., pending completion of the University's initial building on the grounds of the National Naval Medical Center in Bethesda, Md.

The Class of 1980—5 women and 27 men—was selected from more than 1,700 applicants. It's a young and bright group: the average age is 23.8 years, the average college grade point is 3.5 on a scale of 4. All students are active-duty members of the uniformed services, appointed to the grade of ensign (Navy), second lieutenant (Army and Air Force), or junior assistant health service officer (Public Health Service). In return for their education, graduates must practice at least

seven years in one of the uniformed services.

Although several of the Navy-sponsored medical students have previous military experience, only one—ENS Terence C. O'Grady—has already served in the Navy Medical Department. Until a few months ago he was a Medical Service Corps lieutenant assigned to the Naval Surface Weapons Center, Dahlgren, Va., where he studied the effects of nonionizing radiation. After four years of research, ENS O'Grady says, "I had come to the point where I wanted to get into medical work and deal with people on a one-to-one basis." He already held a bachelor of arts degree in the biological sciences and a master of arts degree in molecular biology, both from California State University at Fullerton. So he applied to 15 medical schools and chose the USUHS because "the program was so enticing."

The best thing about the USUHS, ENS O'Grady says, is that "it allows you to study medicine in the atmosphere you will be working in later. Even as a student you have a chance to get into operational areas

such as aviation medicine and undersea medicine."

**Commitment.** ENS O'Grady, who is interested in pursuing a residency in operational medicine, is set on a Navy medical career. "You just can't make this kind of commitment and not want to stay in the service," he says, anticipating his four years of training at the USUHS.

Joining ENS O'Grady as Navy-sponsored members of the charter class are:

- ENS James C. Alexander, Jr., a native of Sedalia, Mo., and a former lieutenant in the Naval Reserve. Following graduation from the University of Missouri in Columbia, ENS Alexander trained as an anti-

Naval Science Scholastic Award, was twice awarded the American Legion Scholastic Award, and was named to Phi Kappa Phi National Honor Society.

- ENS John R. Pedrotty, Jr., of Florissant, Mo. A former Navy lieutenant who served five years on active duty, he is qualified in nuclear submarines and saw duty in Vietnam waters. He holds the Navy Commendation Medal, Navy Expeditionary Medal, Navy Unit Citation, Vietnam Service Ribbon with one star, and the National Defense Ribbon. ENS Pedrotty is a *cum laude* graduate of Notre Dame University, where he was the 1970 recipient of the Strake Award pre-

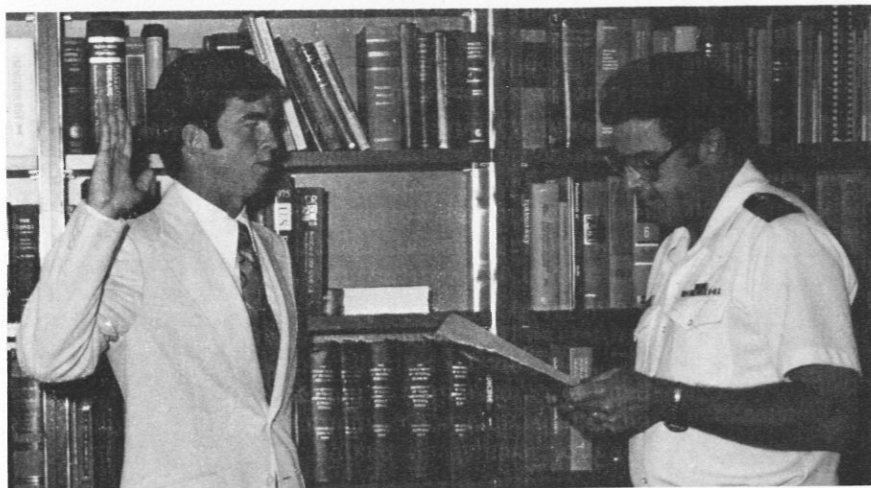
helicopter pilot who served in Vietnam from 1969 to 1970. He holds the Distinguished Flying Cross, the Air Medal with 25 oak leaf clusters, the Bronze Star, the Vietnam Service Medal, the National Defense Service Medal, and the Vietnam Campaign Medal. A *magna cum laude* graduate of the University of West Florida, he twice received that university's foundation scholarship, and participated in a work-study program in the genetics laboratory.

- ENS Sandra A. Yerkes, of Franklinville, N.J., who was commissioned in the Naval Reserve following graduation from Pennsylvania State University last May. As a Naval ROTC cadet, she won the Reserve Officers' Association Award and was a member of the Quarterdeck Society and Scabbard and Blade.

Addressing members of the charter class at welcoming ceremonies held 19 October, The Honorable David Packard, chairman of the Board of Regents, said the USUHS is "dedicated to the problems of military medicine and public health medicine." He told the students, "We have a unique opportunity to build one of the outstanding medical schools of the world."

**Career-oriented.** Anthony R. Curreri, M.D., first president of the USUHS, discussed the University in the October issue of *Military Medicine*. Acknowledging "considerable misinformation and misunderstanding" about the University, Dr. Curreri said the end of the military draft demanded that new avenues be developed to obtain career-oriented medical officers. While only 1% of physicians trained exclusively in civilian institutions complete a military career, and only 25% of physicians trained in military residencies, Dr. Curreri predicted that 75% of USUHS graduates would become career medical officers.

Discussing the costs and benefits of the University, Dr. Curreri noted that the General Accounting Office had determined a \$26,236 "cost per staff year of expected service" for



CAPT Stephen Barchet (MC) swears in ENS Pedrotty

submarine warfare officer and served three years on active duty. Before entering the USUHS, he did graduate work at the University of Missouri and taught there in the comparative anatomy laboratory.

- ENS Thomas D. Castner, a native of Carlsbad, Calif., and a former lieutenant in the Naval Reserve. A *cum laude* graduate of the University of California at Berkeley, he was named "academic star" of his Naval ROTC unit. ENS Castner's father, CAPT David V. Castner, Jr., is a retired Navy Dental Corps officer.

- ENS Jonathan B. Clark, of College Station, Tex., a former naval flight officer. While at Texas A&M University, he won the Professor of

sented to the outstanding Naval ROTC graduate.

- ENS William D. Plummer, of Wilkes Barre, Pa., who received his commission last May after graduating with highest honors from Pennsylvania State University. While at Penn State, he was elected to Phi Kappa Phi National Honor Society, participated in the biology honors programs, and completed an independent research project under the direction of Dr. Emerson Hibbard.

- ENS Amy M. Tsuchida, of Seattle, Wash. She is a graduate of the University of Washington and a former aikido instructor.

- ENS Stanton K. Wesson, of Pensacola, Fla., a former U.S. Army

each USUHS student. The cost per student under the Armed Forces Health Professions Scholarship Program was \$32,068 when total federal support of civilian schools was considered.

The GAO also recognized "additional benefits . . . which must be considered along with the program's cost effectiveness." These "nonquantifiable benefits" result from the USUHS's four-year curriculum of 42 months, some 12 to 14 months longer than civilian medical school curricula, Dr. Curreri said. In the extended training time the USUHS will emphasize problems unique to military medicine, including:



**ENS Tsuchida starts medical career**

- logistics of rapid deployment, relationship with other military branches, and management of mass casualties or diseases.
- diagnosis and treatment of exotic disease.
- body changes resulting from extremes in temperature, altitude, depth, and solitude.
- body injury resulting from new weaponry.

Dr. Curreri reported that the USUHS plans to expand admissions to 175 students annually over the next five years. "It is our firm belief that the Uniformed Services University could be established at a reasonable cost and become a great asset to the military, the nation, and the world," he said.

## Aviation Medicine

# Family Practice Takes Flight

One physician caring for operational aviation personnel and their families, too—that's the innovative concept being tested at Naval Air Station, Jacksonville, Fla., by the Navy's first "family practice flight surgeons."

At the new aviation family practice unit—located in a branch clinic of Naval Regional Medical Center Jacksonville—physicians trained in both family practice and aviation medicine are caring for fliers and their families. When the unit is fully staffed, each physician will deploy with his squadron, while other physicians in the unit will care for the families the deployed squadron leaves behind.

The experimental program began when a few Navy flight surgeons chose family practice as their clinical specialty but were reluctant to forgo the challenges and rewards of aviation medicine. One of these officers suggested combining family practice with aviation medicine. Among the possible advantages:

- Flight surgeons could expand their traditional role and qualify for clinical board certification in family practice.
- Air unit commanding officers would have a single adviser on medical problems affecting their command's mission.
- A physician who cares for both the flier and his family is more likely to spot problems aggravated by the family's separations and can work with the family to solve those problems.

In the spring of 1975, two flight surgeons graduated from family practice residency training at NRMCC Jacksonville, having received residency credit for their previous training in aviation medicine. Permission was also obtained from the American Board of Family Practice for family practice residents at Naval Aerospace and Re-

gional Medical Center, Pensacola, to take aviation medicine electives in their final year.

**Test.** Patrol Wing 11 in Jacksonville was chosen to test the "family practice flight surgeon" concept. This functional patrol wing comprises nine squadrons, each with about 365 men, which deploy for five to six months to Keflavik, Iceland; Sigonella, Sicily; Rota, Spain; or Bermuda. Each squadron having a flight surgeon billet will be assigned a family practice/flight surgeon, who will accompany the squadron during its deployment, help it get settled overseas, and check the health of the squadron being relieved. Because there are Navy flight surgeons stationed permanently at deployment sites, the squadron flight surgeon may return to Jacksonville before the deployment ends.

The first member of the aviation family practice unit, which opened in September 1975, was LCDR Steven J. Hazen (MC), a former flight surgeon who had just completed family practice residency training. He has since been joined by LCDR Richard A. Kingston (MC), a family practitioner; LCDR Robert D. Skipworth (MC), an undersea medicine officer/family practitioner; LCDR William J. Lynch (MC), a flight surgeon; and LCDR Barry Mullen (MC), a flight surgeon family practitioner. Rounding out the staff are a family practice nurse practitioner and a physician's assistant.

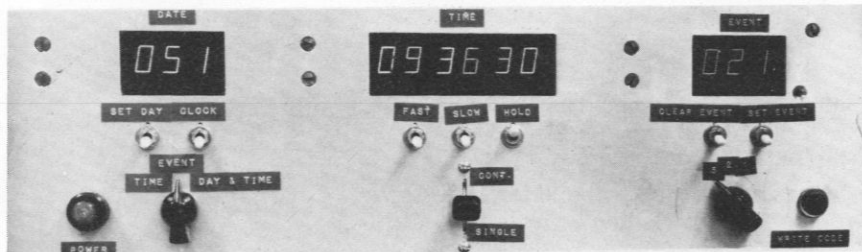
It will take until June 1977 to accumulate enough data to evaluate the program. Meanwhile, the Medical Department will be watching the Jacksonville experiment to see whether aviation medicine and family practice can be combined to satisfy the needs of the fleet—at homeport and while deployed—as well as the needs of family members.



## Biomedical Device Is New from NMRI

A new biomedical instrument designed at the Naval Medical Research Institute will make it easier to analyze medical data recorded on magnetic tape. The instrument records the time of day, the time and the date, or consecutive event numbers in parallel with physiologic data on magnetic tape and oscillographic paper.

Information commonly recorded on magnetic tape includes physiologic pressures and other data collected from automated biomedical equipment in cardiac catheterization laboratories, intensive and coronary care units, operating rooms, and at bedside. Although



Hand-built laboratory model of time code generator

physicians and other health care providers usually need to review only short sections of these tapes, it can take considerable time to locate the desired sections.

With the new NMRI instrument, investigators can quickly identify any portion of the tape they need. Time, date, and indexing information is introduced in a single brief sequence of binary code that can be read without the use of a decoding machine. Codes are used only when investigators wish to annotate their recordings with the time of day or

the time and the date that the recordings were made. The instrument will also record consecutive event numbers to index and identify important events: the injection of drugs, withdrawal of blood samples, cardiac output, and so forth.

The new instrument was designed by CDR Donald J. Sass (MC), head of the Biophysics Division, Environmental Bioscience Department, at NMRI. Except for the fluorescent digital display, it is solid state and contains about 50 integrated circuits.

## Scholars' Scuttlebutt

### New Tax Ruling

Many Navy participants in the Medical and Osteopathic Scholarship Program (MOSP) and the Dental Scholarship Program (DSP) sought legal advice during the last tax filing period to determine whether their active-duty pay and the value of their tuition, books, and fees were taxable. Some students were told that no taxes were due and hence filed no returns; others were advised that taxes were due on both base pay and the value of tuition, fees, and books.

Some students who received refunds based on returns in which they excluded a part of their active-duty pay were concerned that they had improperly filed or might later be audited and required to pay back taxes plus interest. This possibility was also of concern to students who had been advised not to file a return.

To resolve the problem, in May 1976 the Internal Revenue Service was asked to rule on the tax treatment that should be accorded MOSP and DSP students. We were seeking both a definite answer for our students and a single set of guidelines for IRS auditors.

In its ruling, the IRS held that amounts provided to or for MOSP and DSP participants for tuition, fees, books, and salaries *do not* constitute scholarships or fellowships, which may be excluded from gross income under section 117 of the Internal Revenue Code. Hence, the IRS ruled that these amounts must be included in the gross income of program participants, *except to the extent that Public Law 93-483 applies in certain years.*

Public Law 93-483 provides that amounts received as scholarships, contributed services, and accommodations by participants in the Armed Forces Health Professions Scholarship Program, or similar programs, shall be treated as scholarships under section 117 of the Internal Revenue Code regardless of the duty status of the military student and regardless of whether a period of active duty is a condition of receiving the payments.

At the time of the IRS ruling, Public Law 93-483 applied only to scholarship funds received during 1973, 1974, and 1975. The IRS therefore concluded that the value of tuition, fees, and books could be excluded from gross income during those specific years. But the IRS also ruled that regular pay and allowances received by MOSP and DSP participants were to be included in gross income and were therefore taxable.

Public Law 93-483 was amended recently by section 2130 of the Tax Reform Act of 1976. This amendment extends the tax exclusion benefits of Public Law 93-483 to calendar years 1976, 1977, 1978, and 1979, *provided the medical or dental scholarship student receives scholarship training during 1976.* Therefore, in line with the earlier IRS ruling, participants now enrolled in either MOSP or DSP need not include the value of their tuition, fees, and books in their gross incomes for calendar years 1976-1979. Base pay and taxable allowances must be included. However, students who join either program *after* 1976 must include in their gross income the value of their tuition, fees, books, base pay, and taxable allowances.

# BUMED SITREP

**MEDICAL MALPRACTICE . . .** Public Law 94-464, which applies to medical malpractice claims accruing on or after 8 October 1976, protects military physicians, dental officers, and other health care personnel practicing in the U.S. and its territories against malpractice suits by providing that the injured party's exclusive remedy is suit against the U.S. under the Federal Tort Claims Act.

Briefly, the Government will assume responsibility for the negligence or wrongful acts or omissions of military health care personnel that result in personal injury, including death, provided that the members were acting within the scope of their military employment, and provided the act or omission occurred in the U.S. or its territories.

Military health care personnel stationed outside the U.S. and its territories are not covered by the "exclusive remedy" provisions of this law because injured parties have no remedy under the Federal Tort Claims Act for injuries sustained overseas. The new law does, however, provide that the Secretary of Defense or his designee may "hold harmless or provide liability insurance" for military health care personnel assigned to foreign countries. Although this aspect of the law has not yet been implemented by the Secretary of Defense, arrangements are under way to ensure appropriate medical malpractice coverage for such health care personnel.

## HEALTH CONDITIONS ABROAD . . .

Information about health conditions in infrequently visited areas is always needed. Medical Department representatives aboard Navy ships visiting areas where no U.S. military bases are established should prepare a report on local health conditions, following the format given in the *Manual of the Medical Department*, Chap. 2, Art. 21. If there is not enough time to obtain all the information called for, submit a partial report. Reports should be sent to BUMED Code 55 with copies to cognizant fleet commands and Navy environmental and preventive medicine units.

Before your ship stops at an infrequently visited port, check with a Navy environmental and preventive medicine unit for information about health conditions.

**DENTAL REPORTS . . .** Beginning 1 Jan 1977, Medical Department activities shall submit supplemental DD-477 reports (Dental Service Reports) as follows:

- One supplemental report to include all dental treatment that personnel attached to the facility provide after working hours to non-active-duty beneficiaries.
- Another supplemental report to include only dental treatment that Ready Reserve dental officers provide after working hours to non-active-duty beneficiaries.

BUMED needs this information to assess the amount and type of services being provided to other than active-duty members. For more information, contact BUMED Code 6141 at (Area code 202) 254-4250, or Autovon 294-4250.

**CONSTRUCTION . . .** Congress has approved these medical projects for the Navy's FY77 Military Construction Program:

- A disease vector ecology and control center at Jacksonville, Fla.
- A branch medical/dental clinic at NAS Jacksonville.
- Alterations to the branch medical clinic, and an addition to the dental clinic at Naval Supply Corps School, Athens, Ga.
- A dental clinic at Newport, R.I.
- A 104-bed hospital at Orlando, Fla.
- An addition to the preventive medicine unit in Pearl Harbor, Hawaii.
- A branch medical/dental clinic at NAS Brunswick, Maine.
- In the San Diego area: a preventive medicine unit, a branch dental clinic at NAS North Island, and land acquisition in Murphy Canyon Heights.

**ETHICS CODE . . .** Congress has established a Code of Ethics for Government Services which applies to Department of Defense personnel. According to the Code, anyone in Government service should:

- put loyalty to moral principles and to country above loyalty to persons, political party or Government department.
- uphold the Constitution, laws, and legal regulations of the U.S. and of all governments therein, and never be a party to evading these laws.
- give a full day's labor for a full day's pay, giving to the performance of duties

earnest effort and best thought.

- seek and employ more efficient ways of accomplishing tasks.
- never discriminate unfairly by dispensing special favors or privileges to anyone, whether for remuneration or not, and never accept favors or benefits under circumstances which might reasonably influence the performance of Government duties.
- make no private promises that relate to the duties of office, since a Government employee's private word cannot be binding on public duty.
- engage in no business with the Government which is inconsistent with the conscientious performance of duties.
- never use information obtained in confidence while performing governmental duties as a means for making private profit.
- expose corruption wherever discovered.
- uphold these principles, ever conscious that public office is a public trust.

## BERRY PLAN FOUNDER DIES . . .

Frank B. Berry, M.D., father of the Berry Plan, died on 14 October at the age of 84. Dr. Berry was assistant secretary of defense (health and medical) from 1954 to 1961, and deputy assistant secretary of defense for manpower (health and medical) from 1961 to 1963. A tireless supporter of military medicine, Dr. Berry developed the plan whereby medical students could defer military service until they completed specialty training.

**KEEP INFORMED . . .** Medical Department officers in clinical as well as non-clinical areas are encouraged to participate in professional organizations concerned with health services management, and to keep abreast of the latest developments in the health services industry. Societies such as the American Hospital Association, American College of Hospital Administrators, Hospital Financial Management Association, and American Public Health Association offer excellent programs for continuing professional education. See BUMED Instruction 1520.8 for information about Navy funding of attendance at short courses and affiliated periods of training.



# NAVMED Newsmakers

With Navy members all over the world lining up for swine flu shots, RADM William M. Lukash (MC) lost no time ensuring the operational readiness of his star patient: President Ford. As reporters looked on, the President rolled up his well tailored sleeve and took his immunization with nary a quiver. Afterwards, testifying to his physician's light touch, the President reported, "I didn't feel a thing."

**John Merchant**, Marine Corps sergeant, wanted to be a hospital corpsman, and he was willing to take a reduction in pay from E-5 to E-3—a loss of more than \$1,000 a year—to attain his goal. So he applied for and got an interservice transfer, with no guarantee he would graduate from Hospital Corps School. But graduate he did, and today he's HM3 John Merchant. "My greatest satisfaction is just to be able to help others," says the enthusiastic corpsman, who works at the branch clinic at U.S. Naval Station, Subic Bay, Republic of the Philippines.

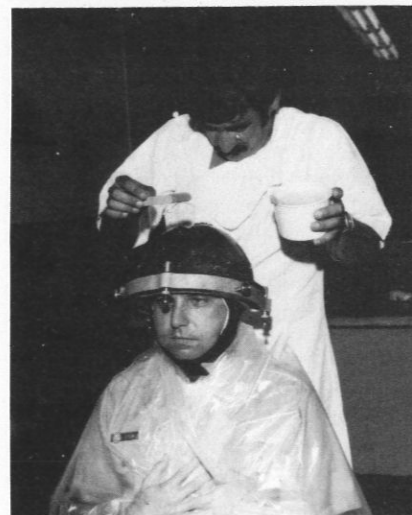
If the ten California high-school students who attended NRMOC Oakland's first Sea Cadet program later decide to go Navy, chalk it up to the good impression of Navy life they got at the medical center. The cadets—participants in a Navy volunteer training program for teenagers—spent two weeks in classes and on the wards learning nursing procedures, first aid and anatomy. At one of their many training stops, HM2 **Michael Broz**, a physical and occupational therapy technician, demonstrated that in the Navy there's always a loom for one more.



White House photo

## RADM Lukash with star patient

Clambering up and down shipboard ladders and wriggling through small doors and windows is old hat for LT **Beadie L. Holden** (NC), believed to be the only certified marine chemist in the Navy. On the job she's a nurse anesthetist, but on her own time she studied marine chemistry and is now qualified to inspect ships for hazardous chemical vapors and residues. When she first followed her instructor on board in her student days, crewmembers thought it was a joke. "But when they saw I was serious, they became very helpful," LT Holden says. Now she hopes to find a way to use her new skills in her Navy nursing career.



## HM1 Westervelt: Not so chic

"I guess you have to suffer for progress," thought the hapless flier as he clutched his plastic cape and wondered what sort of futuristic millinery was perched on his head. "Maybe they're testing a new creme rinse?" he guessed when HM1 **Paul Westervelt** appeared, tongue depressor in hand, and carefully poured a cup of goo into the not-so-chic chapeau. Actually, HM1 Westervelt was pouring a helmet to fit the flier's head—one of the many projects under way at Air Test and Evaluation Squadron 4, Point Mugu, Calif.

To the list of American playwright-crusaders, add a new name: E. Sadikifu Balozi. Around Naval Regional Medical Center San Diego the multitasking writer/director is better known as DT2 **Earl A. Bailey, Jr.**, but it's as Balozi that he writes what he calls "social dramas"—plays dealing with crime and drugs in the ghetto. While his latest effort, "The Death of Lucky," was pulling in audiences at a nearby community theater, DT2 Bailey was at work on three new dramas, parts of which probably reflect his experience as a human resources management specialist under the Navy Human Goals Program.



## HM2 Broz: Training stop



# Policy

## Instructions and Directives

### **BUMED-funded investment equipment**

Procedures have been revised for budgeting BUMED-funded investment equipment. Medical Department activities must maintain a formal equipment replacement program, including:

- an annual, documented review of the condition of investment equipment.
- an inventory of investment equipment.
- a record of anticipated requirements for investment equipment for the next two fiscal years.

Equipment costing \$200,000 or more must be approved by the three Surgeons General before it is procured.

Requests for certain items must be submitted to BUMED for approval before they are procured, regardless of their cost. Such items include:

- hospital communications systems, such as intercoms and telemetry systems.
- microfilm equipment.
- quick copying equipment.
- dictation systems and equipment.
- filing equipment.
- automatic data processing equipment, including data communications systems.
- lease or rental of any equipment or service.

Procedures and references are given for requesting approval of these items.

Equipment for initial outfitting of construction projects shall be included in the project budget. (Tri-service approval is required when such equipment costs more than \$200,000.) Vehicles and certain civil engineering support equipment is budgeted and funded by the Naval Facilities Engineering Command. Materials handling equipment is budgeted and funded by the Ship Part Control Center. Special services equipment for which the command collects a use or rental fee should be financed with nonappropriated funds and included in the operating budget of nonappropriated funds.

The deadline for submitting investment equipment budgets is 15 March of each year. The command priority listing of investment equipment is to be submitted to BUMED Code 463 by 1 September of each year. Equipment costing \$1,000 or more that is procured with BUMED or BUMED-allocated funds must be reported quarterly to BUMED Code 463.

All references listed in this instruction should be reviewed before the investment budget is prepared. An annual report of lease/rental agreements is required, and is assigned report symbol MED 4550-2.

Information required to justify microfilm and filing equipment requests has been added to the guidelines for writing justifications. Investment equipment inventory reporting requirements have been revised.—BUMED Instruction 4235.5F of 7 July 1976.

### **Dental care evaluation**

In the Medical Care Evaluation Program at regional medical centers and hospitals, the only types of dental care that should be evaluated are inpatient care, coordinated inpatient-outpatient types of care, and care given to patients who are transferred from other medical or dental treatment facilities for definitive or specialized care. Hospital privileges for dental officers to provide such care should be based on their training, experience, and demonstrated competence and judgment. Dental inpatients must receive the same basic medical appraisal as patients admitted for other services. Surgical procedures performed by dental officers must be defined and recommended in the same way other surgical privileges are determined. A dental section has been added to the suggested checklist of clinical privileges. Evaluation of competency to perform dental outpatient procedures, such as restorative or endodontic procedures, will be promulgated in the future.—BUMED Instruction 6320.54, change transmittal 1 of 23 July 1976.

### **Ophthalmic services for retired personnel**

Retired military personnel who require vision correction are authorized to receive one pair of standard issue spectacles (S-10 cellulose acetate frame with clear single vision or bifocal lenses), or one pair of nonstandard spectacles. They may be issued two pairs of spectacles only when the examining officer determines two pairs to be essential. When nonstandard or duplicate spectacles are prescribed, the examining officer must justify this order on the Eyewear Prescription, DD Form 771 or DD Form 771-1. Occupational type spectacles such as aviation, industrial safety, double segment and mask insert spectacles will not be furnished retired personnel.—BUMED Notice 6810 of 24 Sept 1976.

### **Reporting issues of controlled drugs**

Combat stores ships and submarine tenders shall report monthly issues of FSC Class 6505 and 6545 "Q" (identified as "K" in the 6505 identification list) and "R" coded medical and dental items to the Commanding Officer, Naval Medical Materiel Support Command, 3500 S. Broad St., Philadelphia, Pa. 19145. The report symbol is MED 6710-4.—BUMED Instruction 6710.58A of 29 Sept 1976.

## Revised mission and function statements

The Chief of Naval Operations has approved the following single standard mission statement for Navy medical centers and hospitals:

To provide general clinical and hospitalization services primarily for active duty Navy and Marine Corps personnel and active duty members of other Federal Uniformed Services. Subject to the availability of space and facilities and the capabilities of the medical and dental staff, provide general clinical and hospitalization services for other authorized persons as prescribed by Title 10, U.S. Code and other current directives to the extent that such effort does not interfere with the provision of care to active duty members. Provide clinical specialty and subspecialty services as directed. Provide coordinated clinic health care services for all medical treatment facilities and activities assigned, and exercise local coordination of other functions as directed. Participate as an integral element of the naval and tri-service regional health care systems. Cooperate with military and civil authorities in matters pertaining to public health, local disasters, and other emergencies.

This revised mission statement shall be incorporated in command organization manuals. Provisions of Title 10 of the U.S. Code regarding the legal entitlements of eligible beneficiaries to health care will be added as a common function of all commands, and the capability of each medical center and hospital to provide specialty or subspecialty care will be indicated as a specific function.—BUMED Note 5450 of 3 Sept 1976.

## Inspections of radiographic equipment

Medical Department activities should cooperate with inspectors from the Bureau of Radiological Health, Food and Drug Administration (FDA), by permitting surveys, inspections, and evaluation of radiographic equipment upon request. Activities will forward to BUMED Code 53 a copy of radiographic equipment inspection reports accomplished by the FDA. In addition, activities are authorized to exchange information with the FDA as appropriate.—BUMED Notice 6700 of 5 Oct 1976.

### HOW TO ORDER INSTRUCTIONS AND NOTICES

If your facility does not have copies of BUMED *Instructions* described above, you may order them from: Commanding Officer, Navy Publications and Forms Center, 5801 Tabor Avenue, Philadelphia, Pennsylvania 19120.

Copies of current BUMED Notices may be ordered from: Department of the Navy, Bureau of Medicine and Surgery (Code 0113), Washington, D.C. 20372.

## Notes & Announcements

### IN MEMORIAM

CAPT Robert Allan Phillips, MC, USN (Ret.), whose pioneering work in cholera therapy saved thousands of lives, died 20 September 1976 at U.S. Air Force Hospital, Clark Air Force Base, Republic of the Philippines. He was 70 years old.

Dr. Phillips was founder and first commanding officer of Naval Medical Research Unit No. 2 in Taiwan, where he developed an intravenous fluid replacement therapy that has become the standard treatment for cholera and other diarrheal diseases throughout the world. Today only about 1% of cholera victims die, compared to the 50% of victims who died from the disease before the new treatment was developed. In 1964, CAPT Phillips was awarded the Distinguished Service Medal for his efforts to control "diseases which once threatened members of the Armed Forces and plagued populations of friendly Asian countries."

Born in Clear Lake, Iowa, on 16 July 1906, Dr. Phillips earned a B.S. degree from Iowa State University and an M.D. degree from Washington University, St. Louis. After interning at Barnes Hospital, St. Louis, he held faculty positions in the medical schools of Harvard, Yale, Stanford and Cornell Universities, and a staff appointment at the Rockefeller Institute, New York City.

Dr. Phillips joined the Naval Reserve in 1940 and transferred to the regular Navy in 1946. From 1947 to 1949 he directed the activities of NAMRU-3 in Cairo and began his research on cholera. He then spent several years at the Bureau of Medicine and Surgery planning and negotiating the establishment of NAMRU-2 in Taiwan before taking command of that facility in 1955. It was during his tenure at NAMRU-2 that he developed his highly effective method of treating cholera by intravenous replacement of lost body fluids. During a cholera epidemic in Saigon in 1963, NAMRU-2 cholera demonstration teams and local physicians treated nearly 2,000 patients with the new method; only three patients died.

After retiring from the Navy in 1965, Dr. Phillips moved to Dacca, East Pakistan (now Bangladesh) to direct the Pakistan-SEATO Cholera Research Laboratory. There he supervised studies of the efficacy of cholera vaccines and further refinement of therapies for cholera and other severe diarrheal diseases. Turning



CAPT R.A. Phillips  
1906-1976

his research interest to nutrition in developing countries, he moved to Taipei in 1970 to study amino acid physiology among healthy and malnourished Taiwanese people. He continued his nutrition research, supported by the Office of Naval Research and by private foundations, until his death.

### DENTAL CONTINUING EDUCATION COURSES SET FOR FEBRUARY

The following dental continuing education courses will be offered in February 1977:

*National Naval Dental Center, Bethesda, Maryland*  
Fixed partial dentures 7-9 Feb 1977  
Comprehensive dentistry 28 Feb-2 Mar 1977

*Eleventh Naval District, San Diego, California*  
Maxillofacial prosthetics 28 Feb-2 Mar 1977

*U.S. Army Institute of Dental Research, Walter Reed Army Medical Center, Washington, D.C.*  
Advanced clinical oral pathology 7-10 Feb 1977

*Armed Forces Institute of Pathology, Walter Reed Army Medical Center, Washington, D.C.*  
24th annual course in oral pathology 28 Feb-4 Mar 1977

Requests for courses administered by the Commandant, Eleventh Naval District, should be submitted to: Commandant, Eleventh Naval District (Code 37), San Diego, Calif. Applications for other dental continuing education courses should be submitted to: Commanding Officer, Naval Health Sciences Education and Training Command (Code 5), National Naval Medical Center, Bethesda, Md. 20014. Applications should arrive six weeks before the course begins.

Cross-country travel for dental continuing education courses and professional conferences generally will not be approved because of funding limitations. Similarly, travel from outside CONUS generally will not be approved.—BUMED Code 6.

### CANCER SYMPOSIUM PLANNED FOR JUNE

A symposium on "Current Therapy for Malignancy of the Oral Cavity and Related Structures" will be held 2-4 June 1977 at the National Naval Medical Center.

The symposium will be sponsored by the NNMCM Department of Otolaryngology. For further information, write: CDR Alan D. Kornblut, MC, USNR, Dept. of Otolaryngology, National Naval Medical Center, Bethesda, Md. 20014.

### CASUALTY TREATMENT TRAINING AVAILABLE FOR DENTAL OFFICERS

Dental officers may apply for casualty treatment training at the Naval Regional Dental Center, San Diego. Two four-day courses will be offered: 15-18 February and 3-6 May 1977.

Up to 20 officers may attend each course. Participants will be granted 28 credits by the California State Board of Dental Examiners.

Instruction will be given in techniques of cardiopulmonary resuscitation, maintaining an airway, controlling bleeding, applying splints and dressings, and transporting patients to primary care facilities.

For further information, write: Director, Dental Activities, Naval Station Box 147, San Diego, Calif. 92136. Or telephone (Area code 714) 235-1777, or Auto-von 958-1777.

### NOTES FROM AN AUDIT

Supply and fiscal officers should consider the following information, extracted from a recently completed audit, about citing end use funds for direct turnover purchases:

Navy Stock Fund authorizations could be reduced and duplicate accounting efforts avoided if [the facility audited] would cite customer funds on direct turnover purchases which have a short leadtime. At this facility, all materiel requisitions for stock or direct turnover purchases have been funded initially through the Navy Stock Fund. During calendar year 1975, this facility placed with commercial sources about 5,300 direct turnover procurements, totaling \$761,000. Orders placed against blanket purchase agreements and imprest fund purchases accounted for \$179,000 of this amount. Our review of 100 blanket purchase agreement orders showed that about 65% of these purchases were delivered within seven days. Immediate receipt procurements, such as credit card gasoline purchases and purchases from self-service supply outlets, also have been initially financed through the Navy Stock Fund. These procurements add to the accounting effort and cause Navy Stock Fund levels to rise.

NAVCOMPT Manual, par. 022084.1b(3), provides that "... the Navy Stock Fund will not be used to finance transactions for expense type material not carried locally in the Navy Stock Account when the obligation of customer funds and the delivery of material will be simultaneous for all practical purposes, such as for procurement of not-carried material under blanket purchase agreements or imprest funds." The manual further provides that requisitions for materiel owned by the Defense Supply Agency and stocked at Navy activities normally will not be financed through the Navy Stock Fund.

*Recommendation:* This medical center should ensure that end use funds are cited on direct turnover procurements when appropriate, in accordance with NAVCOMPT Manual, par. 022084.1b(3).



**Response:** In response to these audit findings, the medical center concurred and determined that "simultaneous for all practical purposes" should include an accounting month (30 days). The medical center also began to cite end use funds for:

- All imprest fund purchases.
- Orders placed against blanket purchase agreements and small purchases whenever the quoted delivery date was within 30 days of the order.
- Direct delivery materiel from self-service or an equivalent stock point.
- Over-the-road purchases of gasoline, tires, batteries, and accessories.

Activities operating under the Navy Retail Supply System should consult FMISOINST 4400.12G, Part IV, Section H for specific guidance.

A note of caution is necessary for direct turnovers requisitioned from standard stock. The day that materiel is dropped from inventory becomes the day of obligation for accounting purposes. Therefore, the 30-day "simultaneous" criterion cannot exceed the end of the fiscal year (30 September).—BUMED Code 46.

## HELP AVAILABLE FOR MASS IMMUNIZATION PROGRAMS

The Navy Environmental and Preventive Medicine Unit No. 5 offers the services of a jet injector team for mass immunization against influenza, tetanus, cholera, typhoid, smallpox, and yellow fever. The jet injection apparatus has not been approved for use with booster plague vaccine or with tuberculin PPD.

Generally, the team should be called in only when at least 100 people are scheduled for immunization. Smaller commands are encouraged to coordinate their immunization programs with other ships and stations to create a large enough workload to justify the team's visit.

Requests for the team's services should be submitted at least 14 days before the date set for immunization. Send requests to: Officer in Charge, Navy Environmental and Preventive Medicine Unit No. 5, Naval Station Box 143, San Diego, Calif. 92136. Or telephone (Area code 714) 235-1261/62/63/64; or Autovon 958-1261.

The following instructions must be followed to obtain maximum benefits from the jet injector team:

- Jet injector guns can immunize up to 700 people each hour, so arrange the schedule to allow as many people as possible to participate each minute. Do not schedule immunizations for a payday unless they can be given before pay is distributed. Before the jet injector team arrives, screen all personnel who have known allergies.
- Provide easy entrance and exit to the immunization area. The following physical layout is recommended:

Entrance

Acetone prep station

10-foot space

Jet injector guns

10-foot space

Bleeder check station

Inoculation form container

Exit

- The ship or station medical department should furnish the following personnel and supplies: a physician, who must be in the immediate vicinity; two hospital corpsmen—one to prep the arm, one to check for bleeders; sufficient immunization material; cotton swabs; acetone; Band-aids; an emergency tray.

## EDUCATION BENEFITS CHANGED

President Ford has signed a Veterans' Education Benefits Bill which provides an 8% cost-of-living increase in benefits. The bill also extends from 36 to 45 months the period in which benefits can be collected, and ends the Veterans Administration Education Benefits Program (GI Bill) for people recruited after 31 Dec 1976. A five-year experimental contributory program will replace the present program.

The new bill provides that individuals on active duty before 1 Jan 1977 will have 10 years from date of separation or until 31 Dec 1989, whichever is earlier, to complete schooling under the present GI Bill.

Personnel recruited into the service on or after 1 Jan 1977 will be eligible for education aid only if they elect to participate in a contributory program. Individuals would contribute between \$50 and \$75 each month up to a total of \$2,700. The Veterans Administration will contribute \$2 for each \$1 contributed by the individual.

Funds would be controlled by the Veterans Administration, with monthly payments being made to the individual while in school, as is done under the present system. Individuals would receive the Veterans Administration portion of the fund only if they are in school; if they decide not to go to school, their personal contributions to the fund will be returned on request at the end of an enlistment, or within 60 days, if not on active duty.

## SURVIVOR BENEFIT PLAN IMPROVED

President Ford has signed a bill which increases the minimum income payment under the Survivor Benefit Plan (SBP) from \$1,400 to \$2,100 annually. The bill also eliminates payments when there is no eligible beneficiary; changes from two years to one year the eligibility period for a new spouse; and clarifies the process of designating beneficiaries.

SBP provides widowed spouses of retired or retirement-eligible military personnel with benefits of up to 55% of the service member's retirement pay.

SBP coverage is automatic unless an individual elects not to participate in the program. The monthly cost of the basic program is \$7.50 plus 10% of all retired base pay over \$300. Costs for additional beneficiaries are based on the age of the service member and the youngest child.

## Features

# Computers Against Cancer

"Although our work appears to consist mainly of putting numbers on charts and lines on graphs, we are really quite clinically oriented. The men, women and children these figures represent are our primary concern," says COL Janice A. Mendelson (MC), discussing the mission of the Armed Forces Central Medical Registry. She is the first Army officer to direct the four-year-old tri-service agency located at Brooks Air Force Base, Tex.

Through its subregistries the Armed Forces Central Medical Registry can undertake long-term detailed studies of a large number of patients in a highly mobile society. Cancer patients, for example, may be followed through the Armed Forces Registry of Tumors, the only subregistry now being used. After their initial treatment, patients with cancer often require long periods of rehabilitation. Cancer may recur many years after initial treatment, or may be discovered in other sites. Physicians and institutions that care for patients with cancer have found that an organized system for long-term surveillance of these patients leads to improved patient care and builds a large bank of data with which to evaluate treatment.

In 1967, the U.S. Air Force Medical Service established such a system through its central tumor registry. From this grew the Armed Forces Central Medical Registry, established in 1972. Organizer and first director of both registries was Air Force Colonel Fred G. Conrad (MC).

**Personal interest.** While the Armed Forces Central Medical Registry can supply information researchers find useful for statistical evaluation, its chief mission is to document the progress of patients diagnosed to have cancer or treated



COL Mendelson with HM1 Larry East, one of three corpsmen assigned to the tri-service registry.

for cancer in any U.S. military medical facility. But merely reporting his progress is of little value to the patient or to health care personnel seeking the most efficient treatment for a disease. Selecting, coding and processing information contained in the initial hospital report is essential. The medical records technicians responsible for this task at the Armed Forces Central Medical Registry take a personal interest in "their patients" as they extract and code up to 80 bits of information, placing it into the system by punched card input.

"The completeness of this information, plus the skill and dedication of the technicians, is the registry's cornerstone," says COL Mendelson, who praises her predecessors' foresight in setting up the data collecting system. "The pioneers of

this registry rejected assembly line methods and made each technician responsible for a specific anatomical region, and for all patients afflicted with tumors in that region."

Throughout his or her assignment to the registry, a technician follows the same group of patients. "Many patients tell us they enjoy knowing that someone is really interested in their health," COL Mendelson says.

While medical records technicians may be the heart of a successful registry, the brain is probably the computer—in this case an IBM 360-65 computer at the San Antonio Data Services Center. Data on the 65,000 patient records now in the registry are readily retrievable; about 2,000 new patient records are added each month.

Microfilm copies of the patient's record are retained at the registry, while the original record is kept where the patient is treated. The registry can provide microfiche copies or prints of the record to the patient's physician or to qualified medical professionals studying a disease.

**Breakouts.** Through computer programming, statistical breakouts can be obtained, providing detailed information on the incidence of a wide variety of tumors, the efficacy of the treatment, and the projected life expectancy of affected patients. The number of possible combinations in which data can be retrieved is staggering: 240 pathological codes are used to describe cancer in nearly 200 anatomical regions, and a possible 168 levels of involvement and scores of treatment types are also in the registry.

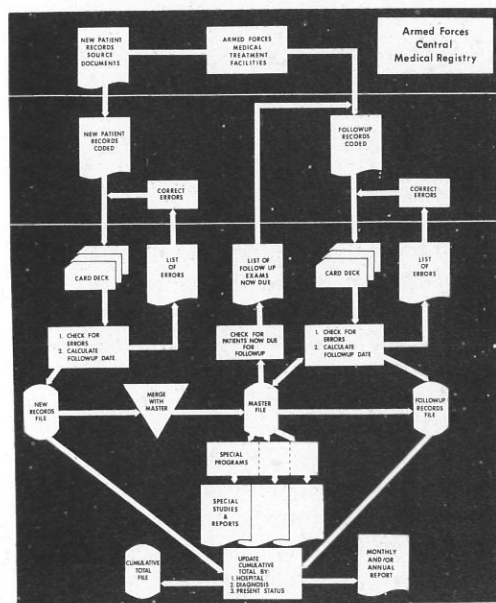
The American College of Surgeons requires hospitals operating an approved tumor registry to follow the progress of their cancer patients as long as the patients live. Military hospitals meet this requirement through the Armed Forces Central Medical Registry, eliminating the duplicate records and



followup examinations that might otherwise result from a patient's frequent transfers and changes of hospitals.

One of the primary concerns is to determine the patient's "quality of life" after treatment. Information obtained about quality of life may be used to evaluate the effects of various methods of treatment and to identify those methods that, while seeming to "cure" the original cancer, create other serious problems that lead to deterioration of the patient's well-being.

Despite progress in curbing cancer, it is still a fearsome disease. The staff of the Armed Forces Central Medical Registry go out of their way to show afflicted patients that there is a military health care organization dedicated to providing long-term help. The information stored in the Armed Forces Central Medical Registry contributes to research efforts that may one day find a way to conquer cancer.



Here's how information goes in and out of the Armed Forces Central Medical Registry: Reports from military medical facilities (top) arrive at the tri-service registry. Here information is coded (middle) and entered into the computer's master files (bottom). Data is made available to aid in patient treatment and to support research studies and reports.

## Enlisted Scene

### NEW ADVANCEMENT CYCLES

After the February 1977 examinations, look for big changes in E-4/5/6 advancement cycles. The Bureau of Naval Personnel has announced that, beginning September 1977, E-4/5/6 advancement examinations will be given each year in March and September instead of February and August.

New advancement cycles have also been set: candidates who pass the examination in March will be advanced from July through December; people who pass the September examination will be advanced from January through June. Transition to the new system begins with the February 1977 advancement cycle, which will run June through December instead of May through October.

The terminal eligibility date for the February advancement cycle has been extended from 1 May to 1 September 1977. Thus, candidates for advancement to E-4/5/6 now have until 1 September to meet time in service (TIS) and time in rate (TIR) requirements. Also, candidates now have until 1 February 1977 to meet all eligibility requirements other than TIS and TIR.

These changes do not affect E-7/8/9 examinations. E-8 and E-9 examinations were given 3 November 1976; the E-7 examination will be given 20 January 1977.

For details on these changes see NAVOP 115/76. Details on the February 1977 cycle will be published in a BUPERS notice.

### PAR REPLACES PRACTICAL FACTORS

The record of practical factors statements used for all Navy ratings are being replaced by more realistic personnel advancement requirements (PAR). The new program becomes effective 1 January 1977, and will determine advancement eligibility for the September 1977 examination cycle.

PAR makes it easier to fulfill advancement requirements by presenting occupational standards as task statements, specifying what is required for each rating. Men and women will be evaluated on their ability to perform required tasks.

Personnel advancement requirements can be satisfied in three ways: (1) command observations of a person's ability in a related area; (2) previous training; and (3) actual demonstration of skills.

The new program also eliminates practical factors requirements for advancement to E-3, E-8 and E-9. A single PAR for E-3 personnel would be impracticable since apprenticeships are so broad. Neither is PAR required for advancement to senior and master chief petty officer, since other means of selection already exist.

BUPERS Instruction 1418.10 of 11 June 1976, available in your personnel office, contains details of the new program.

### MORE ON PERFORMANCE EVALUATIONS

Enlisted men and women are encouraged to use the new Enlisted Performance Evaluation Report—Individual Input form (NAVPERS 1616/21 [8-76]) to alert reporting seniors and commanding officers to any special qualifications or off-duty accomplishments which they believe should be included in the individual's performance evaluation report.

All commands on the Standard Navy Distribution List are receiving an initial distribution of 100 copies of the new form, which will probably be available from the Navy Supply System by February 1977.

The existing performance evaluation worksheets can continue to be used until adequate distribution of the new form has been made.

See BUPERSNOTE 1616 of 20 Sept 1976 for details.



# Horizontal Osteotomy to Correct Maxillary Retrusion: Report of Two Patients

CDR G.W. Oatis, Jr., DC, USN  
CAPT W.E. Sugg, Jr., DC, USN  
CAPT D.N. Firtell, DC, USN

The maxillary horizontal osteotomy was developed to correct malpositioned facial fractures (1). In 1927, Wassmund (2) first mobilized the maxilla along the lines of the LeFort I horizontal or Guerin type of fracture. Axhausen (3), in 1934, used the procedure to correct a malunited maxillary fracture. Today the procedure is used to correct pseudopognathism which is actually maxillary retrognathia or micrognathia.

The maxillary horizontal osteotomy can be performed in two ways:

- a one-stage method described by Dingman (4) in 1951, which requires a nasal, labial, and buccal approach. Antoni (5) also reported this technique.
- a method employing palatal cuts. This technique has been described by Kazanjian and Converse (6), Paul (7), and Mohnac (8).

Until recently, most surgeons preferred corrective surgery in the mandible, regardless of the location of the facial deformity, and hesitated to perform maxillary surgery because the horizontal osteotomy was so difficult. Obwegeser's work (9), published in 1969, increased acceptance of the total maxillary osteotomy.

## METHODS

Pseudopognathism, or relative mandibular protrusion, is uncommon compared to true mandibular protrusion. Pedersen (10) found that only 15% of the

patients he surveyed had maxillary retrusion, and only one underwent a LeFort I osteotomy.

In a 30-month period at the Department of Dentistry, Naval Regional Medical Center, San Diego, we saw 17 patients with maxillary retrusion;\* all received LeFort I osteotomies.

Our presurgical clinical evaluation of these patients revealed classic maxillary retrusion of the midportion of the face from the globella to the upper lip, symmetrical flattening of the malar eminences, and a recessed nose of normal configuration (1). Full face and profile photographs, cephalometric analysis showing no obtuse gonial angle, and a Class III malocclusion confirmed our initial clinical impression. We visualized each patient's postoperative profile by placing cotton rolls in the maxillary vestibule and on the occlusal surfaces of the teeth to increase the vertical dimension and add fullness to the midface (11).

The first 8 of the 17 patients underwent horizontal osteotomy that included variations of Obwegeser's technique (9). We made vertical or horizontal incisions at the level of the mucogingival junction, extending circumferentially from the distal surfaces of the second molars bilaterally to the midline, exposing the entire lateral aspect of the maxilla. One incision may be used for this procedure. Since we used several vertical incisions, we could develop subperiosteal tunnels that allowed the osteotomy cuts to extend from the lateral margins of the piriform apertures posteriorly to the pterygomaxillary fissures. We made these osteotomy cuts as high as possible, just beneath the infraorbital foramen, exposing the anterior nasal spine. The mucoperiosteum and mucoperichondrium in the anterior floor of the nose and the inferior portion of the septal

\*In the same period we saw 114 patients with skeletal or dentoalveolar mandibular protrusion.

From the Department of Dentistry and Clinical Investigation Center, Naval Regional Medical Center, San Diego, Calif. 92134, where CDR Oatis is head of the Oral Surgery Section and CAPT Sugg is chairman of the Department of Dentistry. CAPT Firtell is now commanding officer of Naval Regional Dental Center, Subic Bay, FPO San Francisco 96651.

This study was supported by Bureau of Medicine and Surgery Clinical Investigation Program Project 2-16-416.

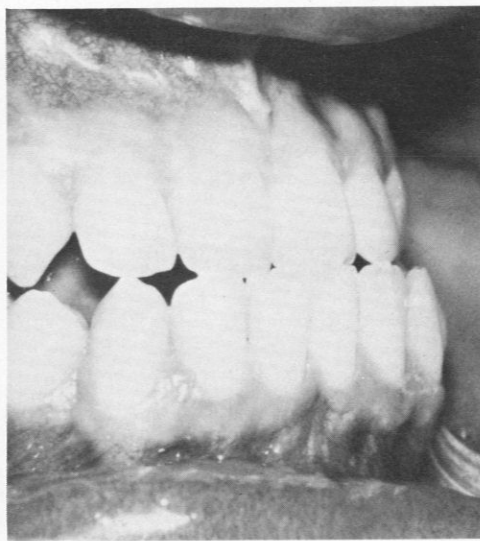


FIGURE 1. Preoperative profile. FIGURE 2. Preoperative occlusion.

PRE-OP

SNA	—	78° (82°)
SNB	—	85° (80°)
ANB Neg	—	7° (2°)
⊥ to NA	—	33° (22°)
⊥ to NB	—	22° (25°)
⊥ to T	—	(131°)
Go GN to SN	—	30° (32°)
Facial Plane Neg	—	6° (11°)
N to A	—	57 mm
A to Pog	—	55 mm

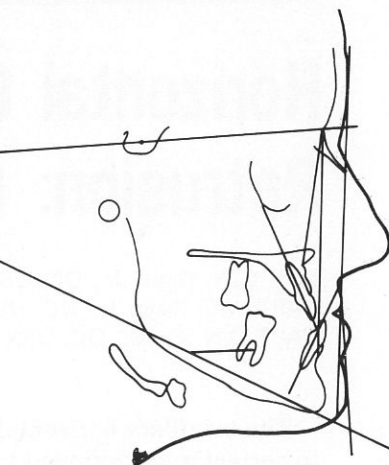


FIGURE 3. Preoperative cephalometric analysis.

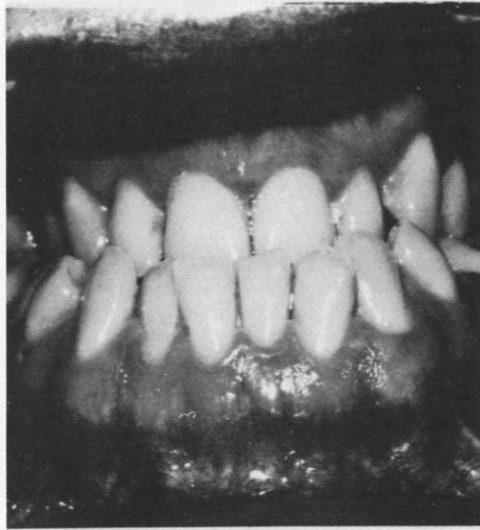
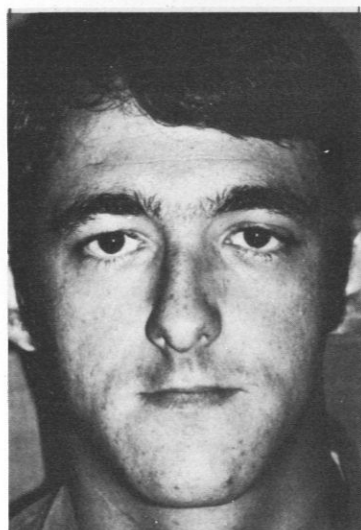


FIG. 7. Preoperative appearance. FIGURE 8. Preoperative occlusion.

PRE-OP

SNA	—	72° (82°)
SNB	—	84° (80°)
ANB-Neg	—	12° (20°)
⊥ to NA	—	39° (22°)
⊥ to NB	—	11° (25°)
⊥ to T	—	140° (131°)
Go GN to SN	—	30° (32°)
Facial Angle-Neg	—	20° (11°)
N to A	—	62 mm
A to Pog	—	70 mm

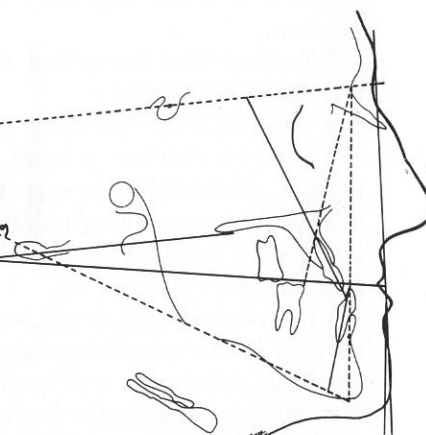


FIGURE 9. Preoperative cephalometric analysis.

and lateral nasal walls were elevated, and the maxilla was separated from the nasal septum. Next, using burs, saws, or chisels, we fractured the lateral nasal walls and with a curved osteotome separated the pterygoid plates from the maxillary tuberosities. The maxilla was mobilized using disimpaction forceps or manual pressure, and placed into the desired position. This technique differs from the technique of Mainous and Crowell (13), who, to prevent septal perforation, recommend low resection of the maxilla where the nasal crest joins the floor of the nose.

In the patients we have seen more recently, we have performed horizontal osteotomy following the technique described by Bell (12). Because of its

downward position, we had excellent access to the maxilla and could section it sagittally, transversely, or circumpalatally to permit us to move the anterior and posterior maxillary dentoalveolar segments simultaneously. A single operation consisting of anterior and posterior maxillary osteotomies and extraction of first or second premolars frequently helps correct severe occlusal problems with associated buccal or palatal crossbites.

It is extremely important to fix the maxilla in the desired position. We attached bilateral circumzygomatic wires to the mandibular or maxillary arch bars to prevent inferior displacement of the maxillary alveolar process and to ensure bony contact. We

PRE-OP - SOLID LINE.  
POST-OP - DOTTED LINE



FIGURE 4. Composite cephalometric analysis.



FIG. 5. Two years after surgery.

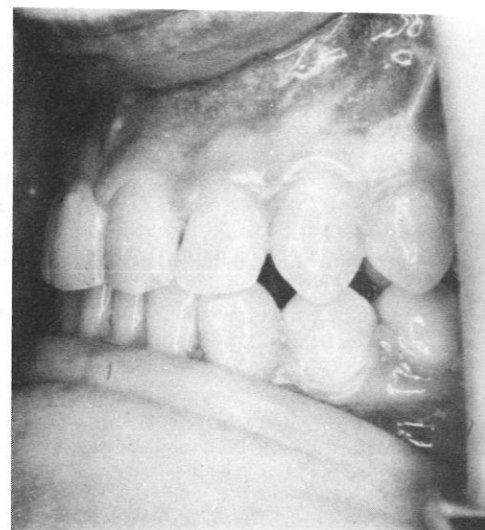


FIG. 6. Occlusion two years after surgery.

PRE-OP - SOLID LINE  
POST-OP - DOTTED LINE

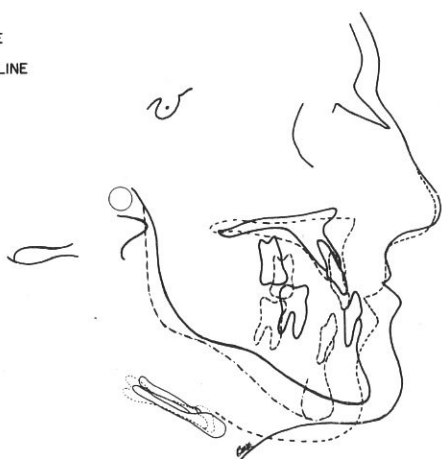


FIGURE 10. Composite cephalometric analysis.



FIG. 11. One year after surgery.

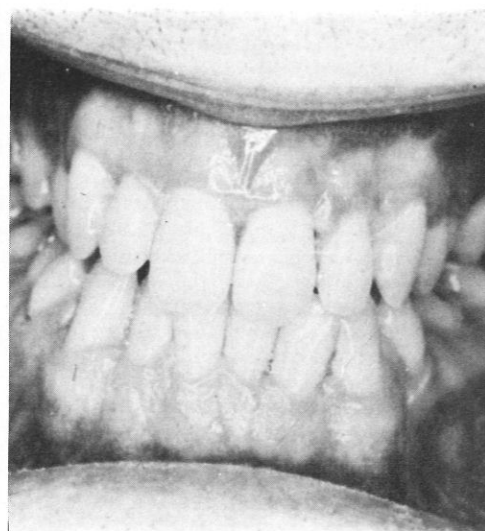


FIG. 12. Occlusion one year after surgery.

then used multiple transosseous wires to stabilize the maxilla and to immobilize the bone grafts which we placed to build bony bridges between the stable and repositioned parts. Obwegeser (9) believes that a bone graft is also necessary between the pterygoid process and the maxillary tuberosity to prevent regression.

#### PATIENT REPORTS

**Patient 1.** This 20-year-old Caucasian female was first seen in the dental clinic in May 1974. Initial examination revealed a clinically prognathic mandible (Figure 1), caused by a maxillary deficiency, with relative mandibular protrusion (Figure 2). Cephalometric analysis demonstrated an SNA angle of  $78^\circ$ , SNB angle of  $85^\circ$ , and GoGn to SN angle of  $30^\circ$  (Figure 3).

After complete evaluation of the patient, including study models, photographs, radiographs, mouldage and psychiatric consultation, a LeFort I maxillary horizontal osteotomy was performed on 12 June 1974, following the standard procedure described by Obwegeser except for the initial incision. We made five vertical incisions: in the midline, the cuspid region bilaterally, and the second molar region bilaterally. Subperiosteal tunnels gave us access to make horizontal cuts posteriorly around the tuberosity to the pterygomaxillary fissure above the root apices. We then inserted blocks of corticocancellous bone between the pterygoid plates and maxillary tuberosities. Only one transosseous wire was placed bilaterally.

The patient had no difficulty until two weeks after the operation when, on 28 June, she complained of an intraoral foreign object. We mobilized the mandible and found a block of corticocancellous bone lying free in the oral cavity. We removed both blocks of corticocancellous bone and reapplied intermaxillary



fixation. All fixation was removed 12 weeks postoperatively. Cephalometric analysis confirmed improvement in the patient's profile (Figure 4); photographs showed fullness in the midface (Figure 5) and a greatly improved occlusion (Figure 6).

**Patient 2.** This 26-year-old Caucasian male had congenital facial deformity and masticatory dysfunction characterized by a pseudoprogathism and Class III malocclusion. He had been aware of his deformity for approximately eight years, and learned four years before admission that his mandible could be corrected by surgery.

Clinically, the patient presented with a prognathic profile, a retruded upper lip, depressed nasal tip, and weak malar eminences (Figure 7). His dentition was in excellent repair, and there was an Angle Class III molar relationship with a bilateral crossbite (Figure 8). Cephalometric analysis showed an SNA angle of 72°, and SNB angle of 84°, and GoGn to SN angle of 30° (Figure 9). Nasion to A point was 62 mm, while A point to pogonion was 70 mm.

In September 1974, the patient underwent a LeFort I maxillary osteotomy. The procedure described by Bell was followed, with the osteotomy performed through a single horizontal incision extending from second molar to second molar. We placed three transosseous wires bilaterally to stabilize the maxilla and hold the bone grafts in place. Blocks of bone were then inserted bilaterally between the pterygoid plates and maxillary tuberosities. No circumzygomatic wires were placed.

The patient's postoperative course was uneventful and the results were excellent. After 12 weeks of fixation with wire and elastic, the maxilla was well united.

On cephalometric analysis (Figure 10), there was an improved profile and Angle Class I molar relationship. The patient was happy with his new facial contour and occlusion (Figures 11 and 12).

## CONCLUSIONS

Maxillary horizontal osteotomy was performed on 17 patients. Minor variations of the classical approach were used for eight patients and the LeFort I downfracturing technique used for the remaining nine. We concluded that:

- Downfracturing the maxilla allows excellent accessibility and visibility.
- Many different maxillary modifications, including anterior and posterior segmental osteotomies, can be performed easily in conjunction with the LeFort I downfracturing technique.
- Bone grafts in the pterygoid-maxillary area are needed only when the maxilla is advanced more than 10 mm.
- Allogenic grafting produces as good a result as autogenous grafting.
- Circumzygomatic suspension wires greatly aid fixation of the maxilla. In one patient in whom we did not use suspension wires, the maxilla was mobile up to five months postoperatively.
- Facial height increases when the maxilla is advanced.

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## DON'T MISS

# Occupational Health in Navy Shipyards

The evolution of Navy occupational health and industrial hygiene programs from 1941 to the present is the subject of a recent article by CAPT George M. Lawton (MC) and Paul J. Snyder.

In "Occupational Health Programs in United States Naval Shipyards," the authors describe the Navy's first industrial hygiene billets, established at naval shipyards during World War II. Although yard forces were greatly reduced after the war, an industrial hygiene office was retained in the medical department of each naval shipyard. The Bureau of Medicine and Surgery issued instructions to deal with hazardous substances as problems were recognized. Current developments include regionalization of occupational health programs and growing activity at the Navy Environmental Health Center.

For copies of the article, which appeared in *Environmental Research* (11:162-165, 1976), write to the Office of Technical Information and Professional Publications, BUMED Code 0010.

# Desensitizing Flying Phobia by Suggestion

LT Stephen A. Timm, MSC, USN

Several investigators (1,2,3) have reported successfully treating flying phobias by desensitization. Scignar, Swanson, and Bloom (3) reported a poor prognosis for patients with multiple anxieties detected on the Fear Survey Schedule. Aitken and his colleagues (4) and Meldman (5) had a high rate of success treating flying phobias with a combination of desensitization and medication.

This study reports the successful treatment of flying phobia by desensitization and hypnotic suggestion. The subject had an unusual ability to respond to olfactory, tactile, auditory, and kinesthetic cues, and was capable of vivid visual imagery. By systematically incorporating hypnotic suggestion into the desensitization process, we helped the patient use his sensory acuity to reinforce the pleasant sensory experiences he had previously associated with flying.

## CASE REPORT

The patient was a 27-year-old white male, a Marine Corps staff sergeant, who had about eight years of experience as a helicopter crew chief. On 27 June 1973, he was referred from enlisted sick call to the Psychiatry Clinic at the Marine Corps Development and Education Command, Quantico, Va., for treatment of chronic alcoholism. The patient showed evidence of alcohol withdrawal and had a history of alcoholic "blackouts," gulping drinks, surreptitious and morning drinking, marital and financial difficulties associated with excessive drinking, frequent automobile accidents and alcohol-related arrests, and repeated failures at abstinence. He was markedly depressed and described feelings of isolation, episodes of crying, suicidal preoccupation, and feelings of losing his mind. He reported drinking about eighteen 16-ounce cans of beer each day. The patient was scheduled to meet a court-martial on charges of driving while intoxicated. He had demolished one of the main entrance gates while attempting to drive onto the military reservation. His blood alcohol level at that time was 0.26.

Psychiatric interview on admission revealed that the patient was the oldest of four children from an unstable home. His father had been hospitalized on a psychiatric service for alcoholism when the patient was 5 years old; his mother had had several "nervous breakdowns." The patient had performed poorly in school despite testing which indicated he was of at least bright

normal intelligence; he repeated the ninth grade and quit school after completing the tenth grade.

The patient joined the Marine Corps in July 1966. He had completed tours of duty in the Mediterranean and Asia, performed well, and had advanced to E-6 within seven years.

The patient had been married five years. It was his first marriage and his wife's second. He had children aged 10 years and 7 years from his wife's first marriage, and children aged 5 years and 4 years from his current marriage.

The patient was admitted to Naval Hospital, Quantico, Va., for five days' alcohol detoxification. He was then aeromedically evacuated to the Alcohol Rehabilitation Center (ARC) at Great Lakes, Ill., where he was hospitalized for six weeks. Upon his discharge from the ARC, he returned to the Psychiatry Clinic at the Marine Corps Development and Education Command for follow-up treatment.

Approximately two weeks later, while in the local alcohol education and treatment program, the patient approached the staff psychologist with a personal problem. He admitted that over the past years he had felt an uncontrollable fear of flying in helicopters. His anxiety was so severe that his Marine Corps career and his sobriety were jeopardized.

The patient said he became qualified as a crew chief on a C-H46 helicopter in April 1969. He logged between 70 and 100 hours of flying time each month and "loved every minute of it." But before his Mediterranean cruise in August 1971, he experienced a few anxiety-arousing incidents associated with flying helicopters. First, in a hard landing attributed to improper maintenance of the helicopter, he was jarred severely and momentarily stunned. Then his aircraft twice narrowly missed a midair collision with another helicopter, apparently because of negligence and misunderstood directions from the control tower.

Assigned overseas in August 1971, he immediately entered flight pay status as a crewmember. His squadron embarked on a cruise of the South China Sea, and within a month one helicopter was lost because of pilot error. No one was killed in this mishap. In October, his ship was on a 24-hour reconnaissance in the Indian Ocean. On Christmas Eve, a helicopter carrying a very close friend of the patient's was lost, and the friend was presumed dead. On 27 Dec 1971, another aircraft was lost; no survivors were found.

It was ascertained that the aircraft were virtually coming apart in the air, but reconnaissance flights were ordered to continue. The patient began to use his position to avoid flying. "I was willing to do anything to keep from getting in one of those helicopters," he reports. The malfunction causing the helicopters to crash was soon discovered and corrected, but the patient still refused to fly. Flying intensified his fear to the point where, in the patient's words, "I wished the plane would come apart so it would be over with." The patient turned to alcohol to reduce his anxiety, and found that he had to be "high" in order to fly. However, he continued to go to great lengths to avoid flying, even risking charges of insubordination and possible court-martial.

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Eventually the patient was assigned to Quantico. When he sought help he was not drinking and the phobia had begun to generalize to other aircraft. In addition, the patient became uncontrollably anxious when he thought about his friends or relatives flying. He became anxious when around pilots and maintenance crews. The patient had not flown for two years. He said he would "rather lose a stripe than get on an airplane." The patient reported no other excessive fears.

## TREATMENT AND RESULTS

Relaxation training was initiated as described by Wolpe (6). No medications were used. The patient was instructed to practice the exercises twice each day by tensing and relaxing each muscle group in turn. After four weeks, he could achieve a deep state of relaxation.

The patient proved able to imagine vividly the horrible midair disintegrations that had occurred while he was overseas. Because these images promptly elevated his anxiety to unmanageable levels, we decided to begin desensitization.

First we prepared a list of 32 actions or situations associated with flying. The patient was asked to rank these items from least to most anxiety arousing. He could add or delete any items he wished. The final hierarchy (Table I) was constructed along two dimensions: proximity to the aircraft, and length of time before a required flight. The initial items dealt with fixed-wing aircraft, which aroused the least anxiety. When the item, "approaching a fixed-wing aircraft from 100, 50, 25, and 5 yards," aroused too much anxiety, the patient substituted "ordering parts" as the first item.

The procedure consisted of first guiding the patient to a state of deep relaxation, then introducing the initial item on the hierarchy. The patient was instructed to lift the index finger of his right hand if he experienced any anxiety while visualizing the scene. If he did experience anxiety, he was instructed to stop visualizing the scene and was asked to identify the area where he felt tension. He then alternately tensed and relaxed those muscles until he felt completely relaxed. The scene was then reintroduced, and if he experienced no tension, the patient moved to the next item on the hierarchy. He progressed rapidly through the hierarchy in this fashion.

The patient was unusually capable of not only visualizing the scenes but also of experiencing other sensations associated with the images, such as smell, pressure, touch, and sound. Most of these sensations were pleasant, and they began to rekindle the enjoyment he had previously experienced when flying. Subsequently, these sensations were used as

**TABLE I.**  
**Desensitization Hierarchy**

1. Ordering parts to repair a helicopter.
2. Approaching a fixed-wing aircraft from 100, 50, 25, and 5 yards.
3. Entering a fixed-wing aircraft knowing you will not have to fly.
4. An acquaintance will be flying in a fixed-wing aircraft.
5. A friend is now flying in a fixed-wing aircraft.
6. Being told by your OIC that you will be flying in a fixed-wing aircraft in 6 months, 3 months, and 1 month.
7. A family member will be flying in a fixed-wing aircraft in 2 weeks.
8. Being told by your OIC that you will be flying in a fixed-wing aircraft in 7 days, 5 days, 3 days, and 1 day.
9. Waking up and knowing this is your day to fly in a fixed-wing aircraft.
10. A family member is flying on a commercial airline at this moment.
11. Entering a fixed-wing aircraft.
12. Approaching a helicopter flight line.
13. In a fixed-wing aircraft awaiting takeoff.
14. Taking off in a fixed-wing aircraft.
15. Flying as a passenger in a commercial 747.
16. Inside a fixed-wing aircraft at standard elevation and speed.
17. Flying in a fixed-wing aircraft in turbulent weather.
18. Landing after a flight in a fixed-wing aircraft.
19. Entering a helicopter, knowing you will not have to fly.
20. An acquaintance will be flying in a helicopter tomorrow.
21. Being told by your OIC that you will be flying in a helicopter in 6 months, 3 months, 1 month, 2 weeks, and 1 week.
22. Being told by your OIC that you will fly in a helicopter in 6 days, 5 days, 4 days, 3 days, 2 days, and 1 day.
23. Waking up and knowing this is your day to fly.
24. Conducting a pre-flight inspection with a highly respected, unusually thorough mechanic.
25. Approaching the helicopter from 200, 100, 50, and 5 yards; then standing beside it before flight time.
26. Checking the helicopter yourself for mechanical maintenance.
27. One hour before takeoff.
28. A family member is now flying in a helicopter.
29. Entering the helicopter prior to lift-off.
30. Sitting in the helicopter, revving the engines for last-minute maintenance checks.
31. Taking off in the helicopter. Flying at standard elevation and speed.
32. A routine landing in a helicopter.



suggestive cues to reinforce his desire to fly.

After approximately four sessions, the patient had progressed to item 24, "conducting a pre-flight inspection." Once he pictured the scene, he was asked to imagine himself walking around the helicopter, simply exploring its shape and contours. Then he was asked to imagine touching the exterior of the helicopter. While imagining this scene, the patient reported feeling the breeze which gently swept across the flats of the runway, carrying the scents of salt water, oil, and exhaust fumes. At that point, the first suggestion was made: "You are now experiencing a strong desire to enter the helicopter. All the pleasurable sensations you used to experience are growing. But in this session you will not enter the helicopter, even though you want to." The session ended after this suggestion had been made.

Most of the subsequent items suggested to the patient a growing desire to fly. When the patient reached item 30, he was asked to imagine himself taxiing down the runway, then revving up the engines, building power for takeoff. Again the suggestion was that he wanted to fly, was completely relaxed, and was enjoying the pleasurable sensations: "You really *want* the aircraft to lift off right now. You are experiencing sensations of excitement, anticipating pleasure while being amazingly relaxed. However, you are not going to fly this time, so I would like you to turn off that scene." The patient was very disappointed at not having "flown" during that session.

By the tenth session, the patient had worked through the entire desensitization hierarchy. He had imagined a complete flight from lift-off to landing, enjoying marked pleasure throughout. In the last few items of the hierarchy, the patient was encouraged to imagine approaching and exploring the interior and exterior of the aircraft. He did so while continuing to experience deep relaxation.

Nearly four months after desensitization treatment began, the patient entered a helicopter and logged about 40 minutes of aircrewman flight time, as verified by his officer-in-charge. The patient reported great excitement over having flown, and his anxiety had been completely manageable.

At followup six months later, the patient and his therapist logged a 30-minute flight. The patient appeared relaxed while in the helicopter, with an appropriate amount of manageable anxiety. There were no signs of panic or debilitating fear. The patient was scheduled for two weeks of flight maneuvers where he would log many hours of aircrew flight time.

## DISCUSSION

This case illustrates how anxiety, precipitated by equipment failures and the subsequent grounding of aircraft, can reduce the effectiveness of flight personnel. Flight surgeons must be aware of the psychological repercussions such anxiety can have for aviators, aircrews, and maintenance personnel.

In an address at the 47th Annual Scientific Meeting of the Aerospace Medical Association in May 1976, Donald A. Berman, M.D., noted that an overwhelming number of aviation mishaps were caused by pilot error. Dr. Berman urged aviation medical examiners to place more emphasis on assessing psychological makeup when evaluating an applicant's fitness to fly. Although this suggestion has merit, it is extremely difficult to weed out all unqualified applicants without excluding a large number of people who may in fact be qualified (false negatives). A more workable solution would be to instruct all crewmembers during flight training on how to manage their anxiety.

The efficacy of relaxation training in treating anxiety and anxiety-related medical problems is well documented. Besides being a remedial therapeutic modality, relaxation training is a preventive approach to anxiety and stress-related illnesses. The ability to achieve deep relaxation is a worthwhile skill easily learned through the use of relaxation tapes or records. If aviators were routinely trained in deep muscle relaxation, there would be a significant reduction in stress-related illnesses and fewer aviation mishaps. A well-designed study comparing the safety records of aviators randomly assigned for training in relaxation skills with aviators who have not had such training would demonstrate to what degree relaxation training is an effective technique in preventing aviation accidents.

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## Clinical Notes

# Blood Bank: The Pink Tag System Revised

LT W. Patrick Monaghan, MSC, USN  
HMC Roland L. Peckham, USN

No blood bank can function reliably without a system to assure accurate identification of the patient, the blood specimen sent for crossmatching, and the donor unit of blood. Information on the patient's wristband must be checked before a blood sample is drawn. The tube holding the blood sample must be labeled with the patient's name, social security number, and the time and date that the sample was collected. The person who collects the sample must sign this label. Each Transfusion Request Form (SF 518) must carry complete patient identification as well as the type of blood product requested, the time and date the product is needed, the physician's name, and the patient's diagnosis and previous transfusion history. This form is then attached

to the unit that will be transfused. Any deviation from these identification procedures may seriously compromise patient care.

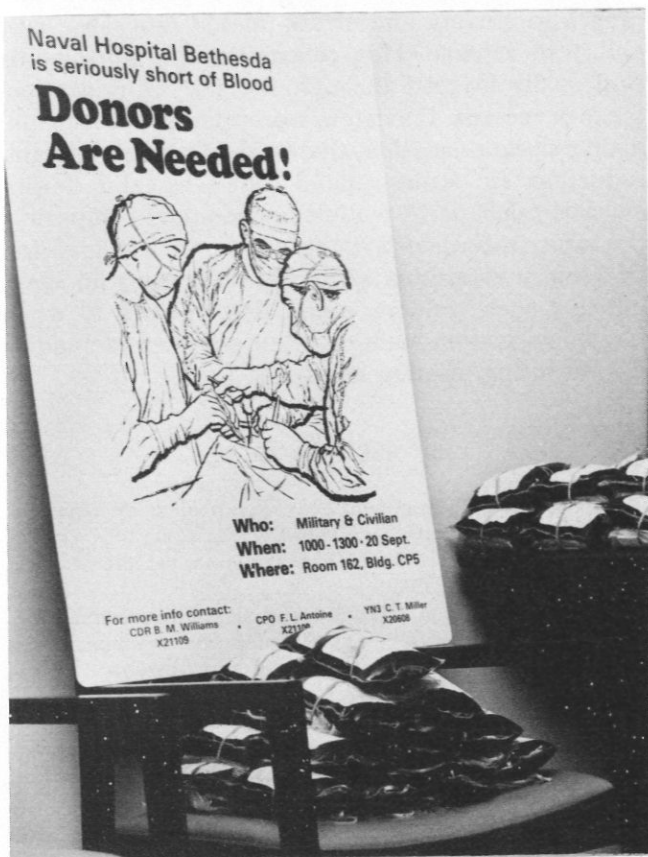
The four-part pink tag system (Figure 1) has been used in Navy blood banks since the late 1940's to assure accurate transfusion of blood or blood components. A major drawback of this system is the time required to write in all the required information: when blood is needed immediately to counter major surgical hemorrhage or traumatic injury, there may not be time for so much paperwork. Another disadvantage: all four parts of the form must be imprinted with the patient's addressograph card. When added to the imprinting needed to complete the Transfusion Request Form and to identify the blood specimen, this requirement means that the addressograph card must be imprinted at least 21 times for a four-unit crossmatch.

At the National Naval Medical Center, Bethesda, Md., we have modified the pink tag system, developing a single-part pink tag that satisfies requirements for accurate blood bank administration. The new tag (Figure 2) is attached to the patient's bed. When blood or a blood component is needed, the tag is presented to the blood issue technician at the blood bank; the unit of blood or component indicated by the transfusion number in the upper right hand corner is then issued.

As a substitute for the bottom portions of the multi-part pink tag that formerly were attached to a unit of blood to identify it, we now use this method: the Transfusion Request Form, carrying patient identification, laboratory data and information about the order, is placed in a plastic envelope and attached to the unit of blood. The envelope ensures that the form will remain legible even if the bag containing the blood accidentally ruptures or the tubing leaks.

Our new pink tag is a simple blood control device that can do the same job as the more complex, multipart form. The streamlined procedure is very effective when large amounts of blood are required quickly to treat severely injured patients.

From the Laboratory Medicine Service, National Naval Medical Center, Bethesda, Md. 20014, where LT Monaghan (Ph.D.) is assistant head of clinical pathology for blood bank, and HMC Peckham is technical and administrative supervisor for blood bank.



**PATIENT'S IDENTIFICATION BED TAG**  
(Attach To Bed)

ADDRESSOGRAPH PLATE

TRANSFUSION NUMBER

NAME

WRIST BAND REGISTER NUMBER

WARD

This tag will be attached to, and remain on the patient's bed. When transfusion is begun, it will be detached by the Medical Officer starting the transfusion, compared to the Blood Bag Identification Tag and then attached to the unit being transfused.

AUTOMATIC RELEASE 0800 HRS. \_\_\_\_\_

EXTENDED RELEASE 0800 HRS. \_\_\_\_\_

NDW-NNMC 6131/15 (REV. 9-69)

**BLOOD ISSUE TAG**

ADDRESSOGRAPH PLATE

TRANSFUSION NUMBER

NAME

WRIST BAND REGISTER NUMBER

WARD

**DETACH AND PRESENT THIS CARD FOR BLOOD ISSUE**  
NDW-NNMC 6131/15 (REV. 9-69)

**TUBE IDENTIFICATION**

ADDRESSOGRAPH PLATE

TRANSFUSION NUMBER

NAME

WRIST BAND REGISTER NUMBER

WARD

IDENTIFICATION OF PATIENT MADE BY \_\_\_\_\_

(Signature of Nurse or Corpsman Identifying Patient)

NDW-NNMC 6131/15 (REV. 9-69)

**BLOOD BAG IDENTIFICATION**

ADDRESSOGRAPH PLATE

TRANSFUSION NUMBER

NAME

WRIST BAND REGISTER NUMBER

WARD

Before beginning this transfusion: (1) Compare the transfusion number on this tag with that on the Patient's red Identification (Bed) Tag! (2) Compare the Wrist Band Register Number on this Tag with the one on the Patient's wrist band. (3) Compare the identifying data on the Blood Bag Label with information on SF518. Sign the SF518 BEFORE STARTING THE TRANSFUSION.

NDW-NNMC 6131/15 (Rev. 9-69) GPO 908-801

← FIGURE 1. Multipart pink tag used in many Navy hospitals.

**PATIENT'S IDENTIFICATION AND BLOOD ISSUE TAG**  
(Attach to bed)

TRANSFUSION NUMBER

✓ CHECK FOR COMPONENT

☐ CROSSMATCH ☐ FRESH FROZEN PLASMA

☐ TYPE AND HOLD ☐ PLATELETS

☐ FROZEN RED CELLS ☐ CRYOPRECIPITATE

ADDRESSOGRAPH PLATE

S S A N

NAME

REGISTER NUMBER

WARD

BRING THIS TAG TO THE BLOOD BANK TO OBTAIN THE UNIT OF BLOOD OR COMPONENT.

AUTOMATIC RELEASE DATE 0800 \_\_\_\_\_

EXTENDED RELEASE DATE 0800 \_\_\_\_\_

NDW-NNMC 6131/15 (Rev. -3-76) GPO 908-802

FIGURE 2. New streamlined pink tag.

**Section II. BLOOD TYPE, COMPATIBILITY**

TRANSFUSION NO.	COMPATIBILITY	
RECIPIENT	MAJOR (DC/PS)	SALINE
	MINOR (PC/DS)	
	<input type="checkbox"/> COMPATIBILITY TESTS NOT PERFORMED	

ARQ TYPE \_\_\_\_\_

PATIENTS IDENTIFICATION—USE EMBOSSE—(for typed or written entries give rank/rate; hospital number and name of facility.)

☆ GPO 19

FIGURE 3. Transfusion Request Form is placed in plastic envelope and attached to unit of blood.



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